



FAIR DATA  
AUSTRIA

FAIR DATA AUSTRIA  
SYMPOSIUM - FUTURE RESEARCH(DATA)MANAGEMENT

ILIRE HASANI-MAVRIQI, TU GRAZ

23.05.2022



TECHNISCHE  
UNIVERSITÄT  
WIEN



universität  
wien



A...kademie der  
bildenden Künste Wien  
Academy of Fine Arts Vienna

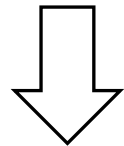
# TRENDS IN SCIENTIFIC RESEARCH

- Rise in data-driven research
- This accelerates the flow of knowledge between different disciplines
- Collaborations and interdisciplinary research - address societal challenges



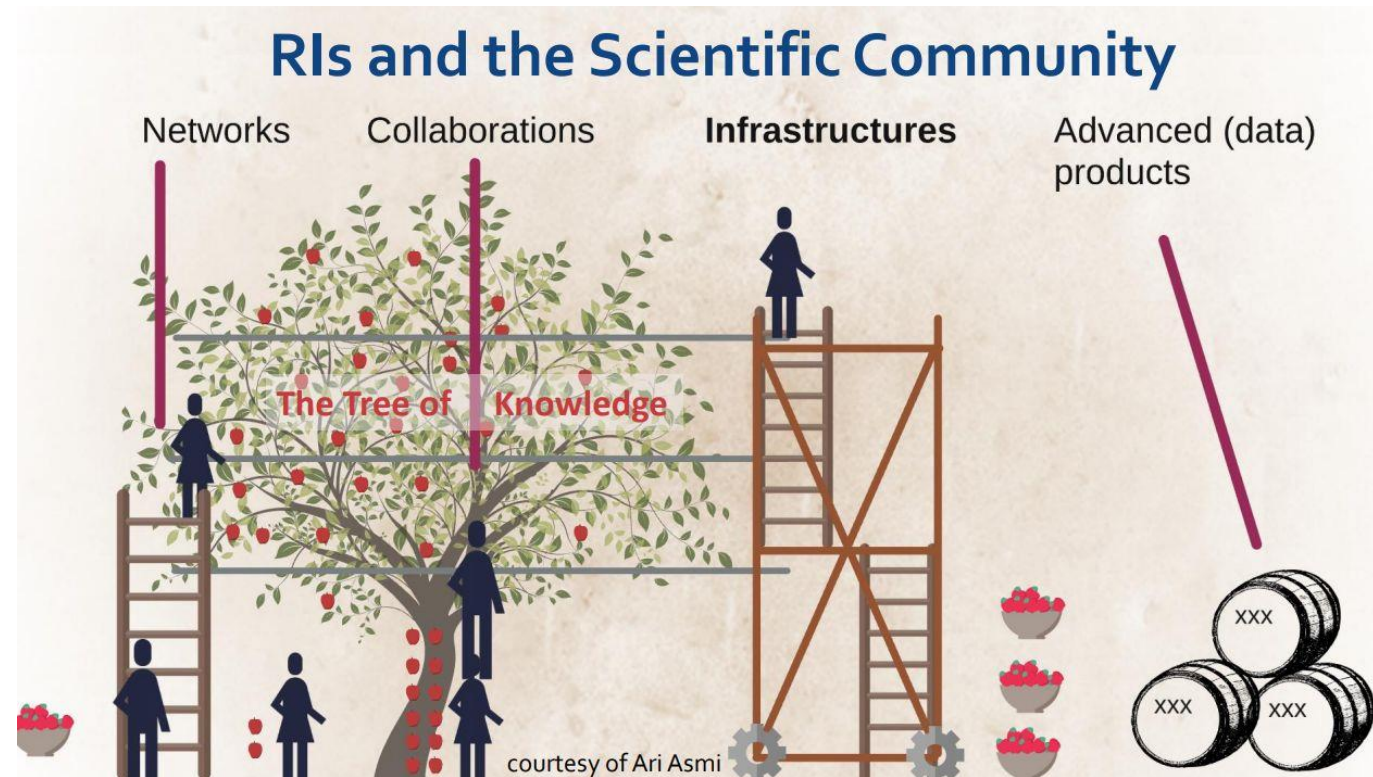
# TRENDS IN SCIENTIFIC RESEARCH

From working as focused experts  
with self-generated data



Towards data discoverability and  
structured collaborations

Building on a sustainable  
**research infrastructure**

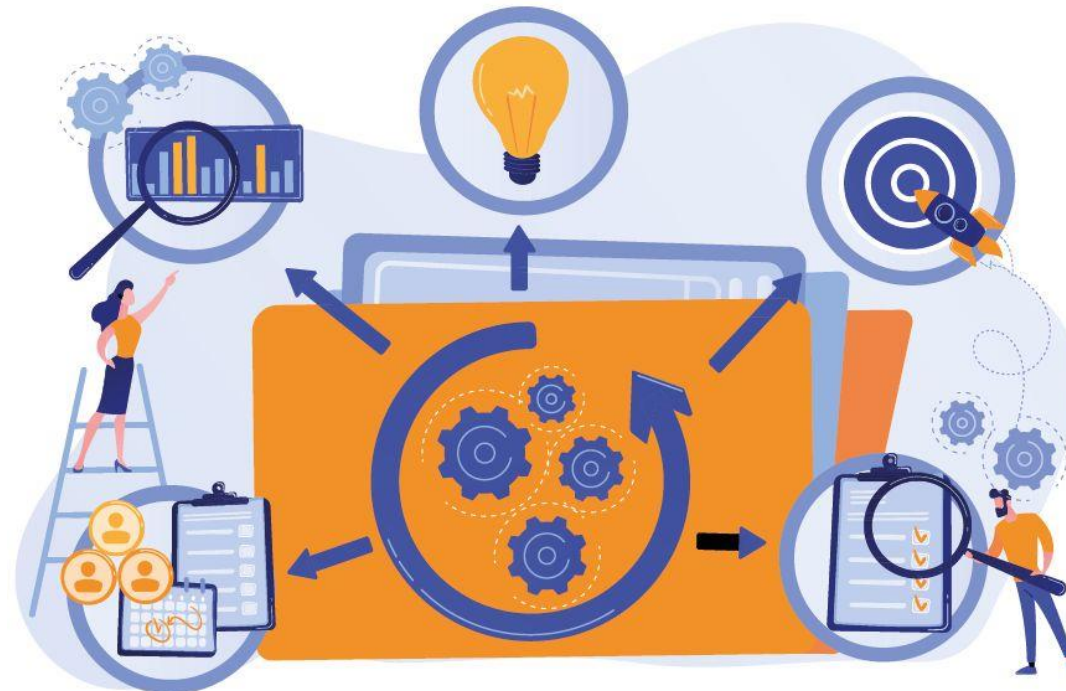


EOSC Future & the Research Communities - Andreas Petzold, ENVRI-FAIR & EOSC Future "Excellence Science"

# PROJECT GOALS

*Promote collaboration between Austrian universities in developing coherent and solid RDM services*

*Working together to create the conditions for the future of data-driven science*



# PROJECT GOALS

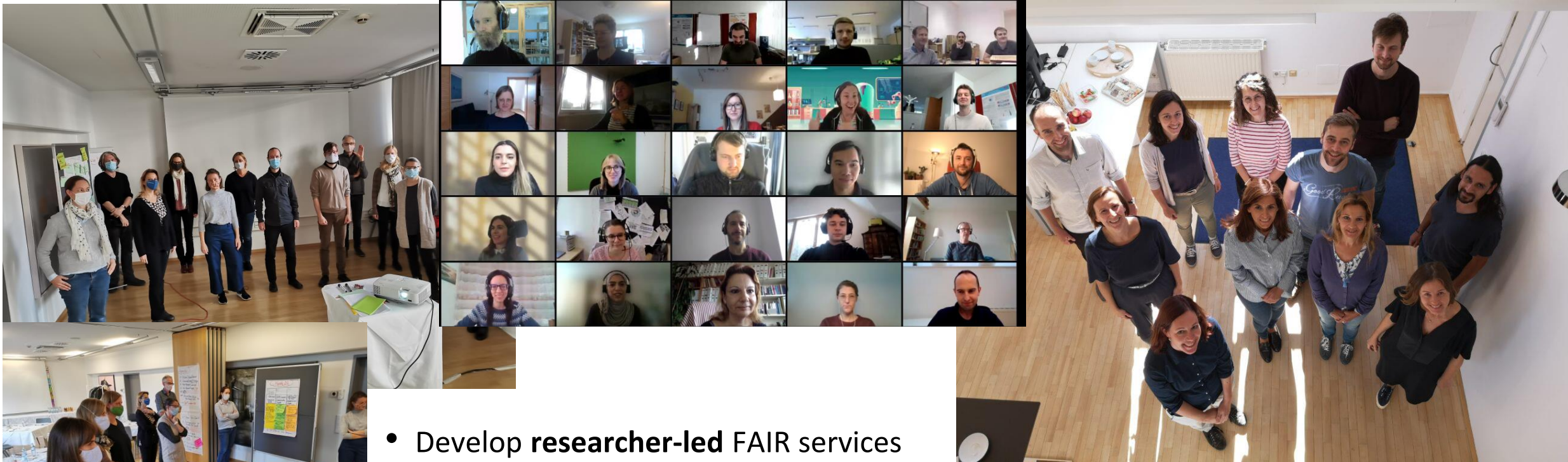


- Tools for the efficient creation of data management plans (machine-actionable DMPs- maDMPs)
- Next-generation repositories for research data and databases



- Development and professionalization of data stewards
- Interinstitutional RDM Training
- Networking and Support - FAIR Office Austria

# FAIR DATA AUSTRIA – TEAM



- Develop **researcher-led** FAIR services
- Develop **social** and **technical** solutions in parallel
- Close the gap between **researchers** and **support staff**
- **National** und **international** networking



# MACHINE-ACTIONABLE DMPS



Fulfilling funder requirements,  
clarifying legal & ethical issues,  
re-using existing data

A **DMP** helps with:

- planning the research process
- managing your data in accordance with the FAIR Principles
- defining rights and responsibilities in a research project maDMPs (DAMAP)

→ Requires expertise in technical aspects, file formats, metadata standards, storage, repositories, long-term archiving

→ Researchers cannot be experts on all these topics

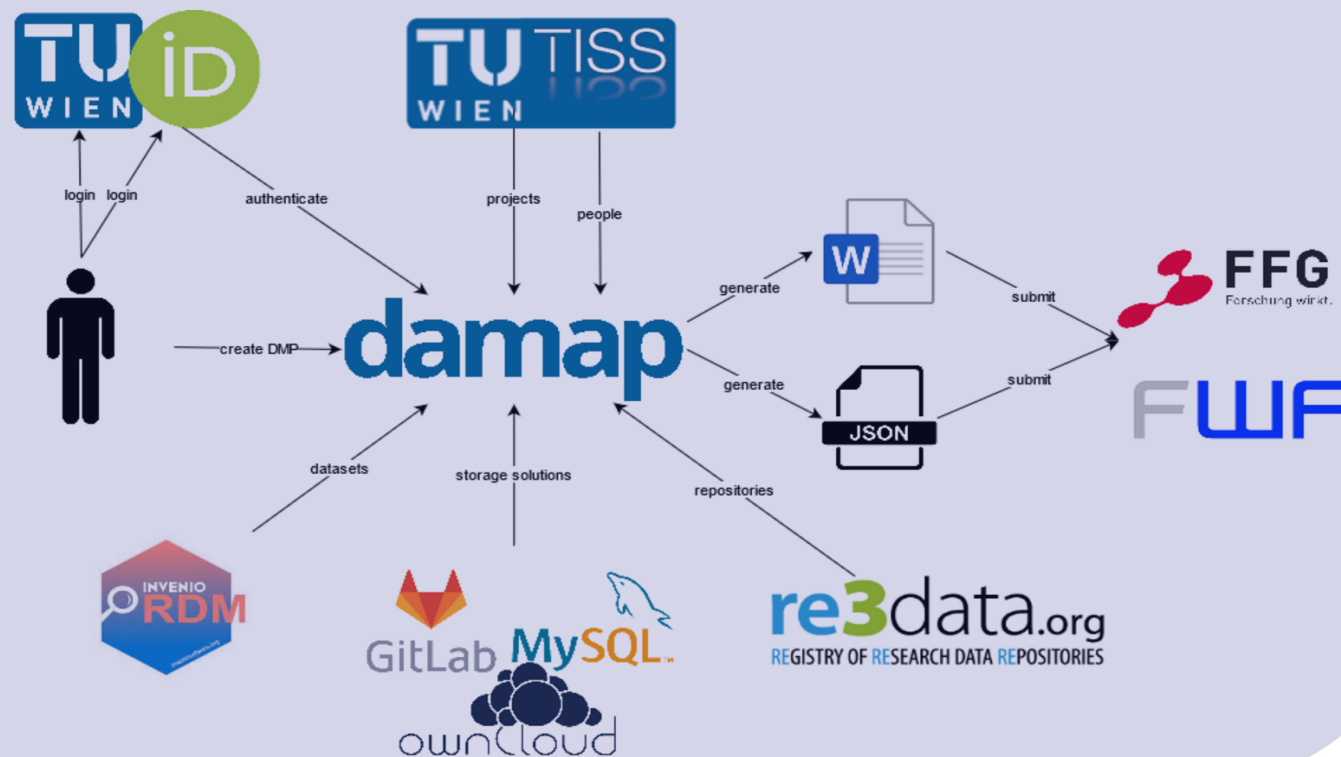
# MACHINE-ACTIONABLE DMPS



Fulfilling funder requirements,  
clarifying legal & ethical issues,  
re-using existing data

## maDMPs (DAMAP)

- Structured information, machines can act on it
- Help with automation of RDM tasks
- Connection between systems - many fields are pre-filled with information

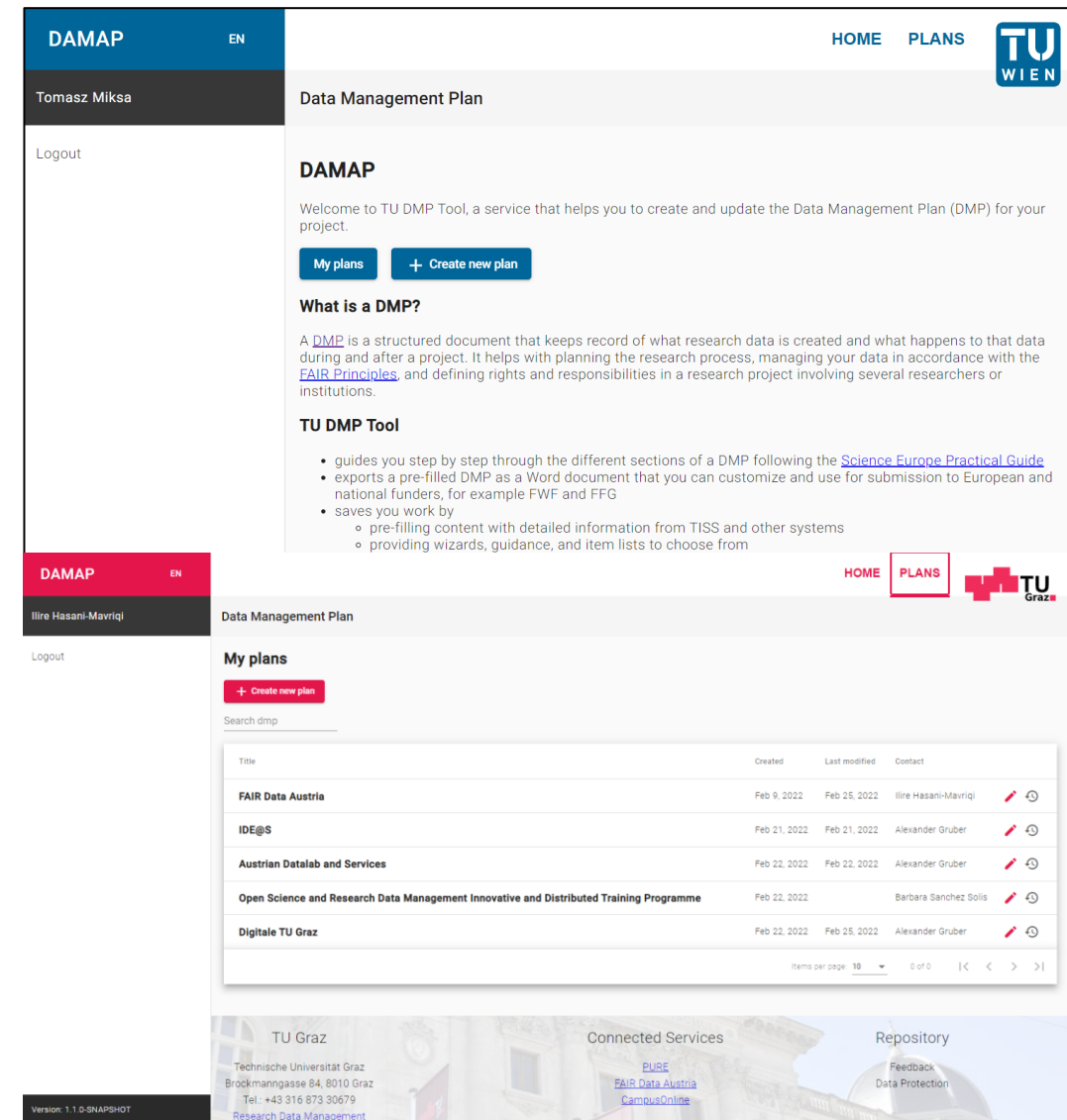




# MACHINE-ACTIONABLE DMPS - DAMAP

- DAMAP is developed by the TU Vienna and the TU Graz and is available as open source (MIT license)
- Source code - DAMAP:
  - <https://github.com/tuwien-csd/damap-frontend>
  - <https://github.com/tuwien-csd/damap-backend>
- The goal is to build an active community
- Austrian universities can start installing the tool

<https://www.youtube.com/watch?v=IxQzqy26Z04>



**Top Screenshot: Data Management Plan**

Navigation: DAMAP EN | HOME PLANS | TU WIEN

User: Tomasz Miksa

Logout

**Data Management Plan**

**DAMAP**

Welcome to TU DMP Tool, a service that helps you to create and update the Data Management Plan (DMP) for your project.

Buttons: My plans | + Create new plan

**What is a DMP?**

A **DMP** is a structured document that keeps record of what research data is created and what happens to that data during and after a project. It helps with planning the research process, managing your data in accordance with the [FAIR Principles](#), and defining rights and responsibilities in a research project involving several researchers or institutions.

**TU DMP Tool**

- guides you step by step through the different sections of a DMP following the [Science Europe Practical Guide](#)
- exports a pre-filled DMP as a Word document that you can customize and use for submission to European and national funders, for example FWF and FFG
- saves you work by
  - pre-filling content with detailed information from TISS and other systems
  - providing wizards, guidance, and item lists to choose from

**Bottom Screenshot: My plans**

Navigation: DAMAP EN | HOME PLANS | TU Graz

User: Ilire Hasani-Mavriqi

Logout

**My plans**

+ Create new plan

Search dmp

Title	Created	Last modified	Contact
FAIR Data Austria	Feb 9, 2022	Feb 25, 2022	Ilire Hasani-Mavriqi
IDE@S	Feb 21, 2022	Feb 21, 2022	Alexander Gruber
Austrian Datalab and Services	Feb 22, 2022	Feb 22, 2022	Alexander Gruber
Open Science and Research Data Management Innovative and Distributed Training Programme	Feb 22, 2022		Barbara Sanchez Solis
Digitale TU Graz	Feb 22, 2022	Feb 25, 2022	Alexander Gruber

Items per page: 10 | 0 of 0 | < >

**Footer:** TU Graz | Technische Universität Graz | Brockmanngasse 84, 8010 Graz | Tel: +43 316 873 30679 | Research Data Management | Connected Services: PURE, FAIR Data Austria, CampusOnline | Repository: Feedback, Data Protection

Version: 1.1.0-SNAPSHOT

# NEXT-GENERATION REPOSITORIES FOR RESEARCH DATA



**Publish, share, give access,  
discover, re-use**

**InvenioRDM** - turn-key RDM repository platform based on Invenio Framework and Zenodo

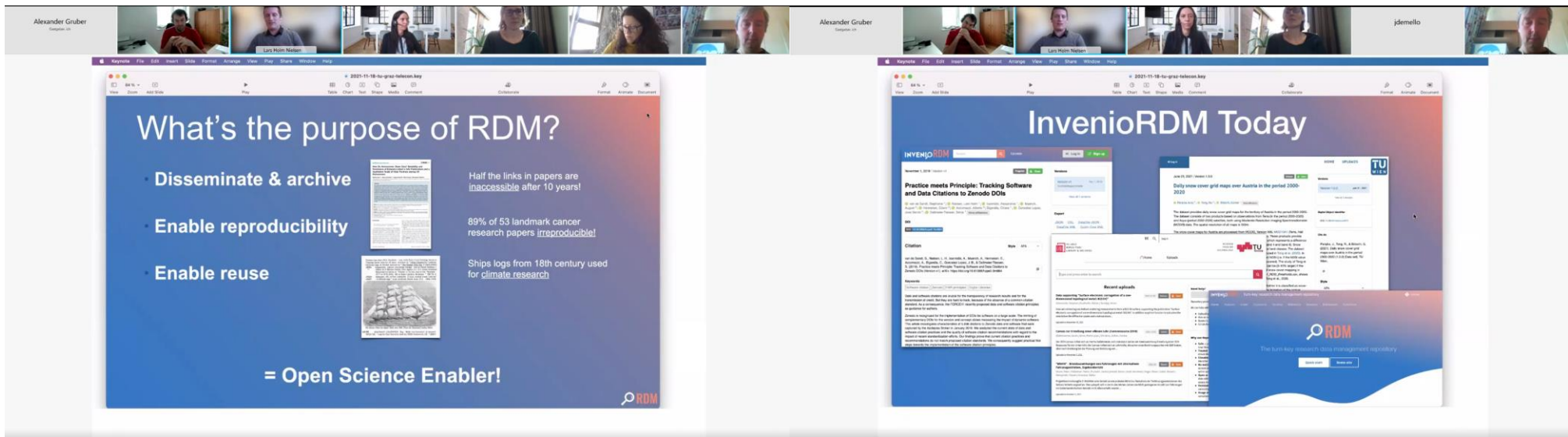
- Quick and easy long-term storage of research data
- Data publication according to FAIR principles and funding body requirements
- DOIs enable citability and increase research visibility

# NEXT-GENERATION REPOSITORIES FOR RESEARCH DATA

- Further development: In-house and international:

<https://www.youtube.com/watch?v=hvAerBLKa08>

- Part of the InvenioRDM community - strategically important: TU Graz and TU Vienna software developers in the core team
- Launch Event 18.11.2021



# NEXT-GENERATION REPOSITORIES FOR RESEARCH DATA - ROLLOUT

DE 🔍 | Login

SCIENCE PASSION TECHNOLOGY

Home Uploads

September 29, 2021 (v1) Dataset Open View

## Supplementary Data to Publication: Additive Manufacturing of an Fe-Cr-Co permanent magnet alloy with a novel approach of in-situ alloying

Arneitz, Siegfried

This data set serves as supplementary data for a publication with the title "Additive Manufacturing of an Fe-Cr-Co permanent magnet alloy with a novel approach of in-situ alloying" to be published in the European Journal of Materials (Taylor&Francis).

Uploaded on September 29, 2021

July 16, 2021 (1.0.0) Dataset Open View

## DONeRF: Evaluation Dataset

Neff, Thomas, Stadlbauer, Pascal, Parger, Mathias

This is the dataset for the CGF 2021 paper "DONeRF: Towards Real-Time Rendering of Compact Neural Radiance Fields using Depth Oracle Networks". Please note the original creators of the individual 3D scenes themselves (individual license files can be found in the individual .zip archives in the dataset):Bulldozer by "Heinzelnisse" (CC-BY-NC); http...

Uploaded on July 16, 2021

<https://repository.tugraz.at/>

<https://researchdata.uibk.ac.at>

UIBK Data Repository

Zentraler Informatikdienst der Universität Innsbruck

### Welcome to UIBK Data Repository

UIBK Data Repository is an institutional service of Universität Innsbruck to enable storing, sharing and publishing of research data according to the FAIR principles. It is accessible for all researchers of Universität Innsbruck via Single Sign-on.

Please note that this service is still under development and has limited functionality. We will add more functionality as development progresses.

Deposit Search FAQs & Instructions

Log out HOME UPLOADS SETTINGS

Welcome to TU Wien Research Data

TU Wien Research Data is an institutional repository of TU Wien to enable storing, sharing and publishing of digital objects, in particular research data. It facilitates the funders' requirements for open access to research data and the FAIR principles by making research output findable, accessible, interoperable and re-usable. This service is developed by the TU Wien Center for Research Data Management and hosted by TU.it.

Please note that this service is still under development and has limited functionality. We will add more functionality as development progresses.

Publish Search Peer-Review Reuse

Planned features

Communities TU Gitlab integration Usage statistics Upload rights for external users

powered by INVENJORDM enabled by FAIR DATA AUSTRIA

POLICIES TERMS OF USE DATA PROTECTION DECLARATION CONTACT

<https://researchdata.tuwien.ac.at>

# NEXT-GENERATION REPOSITORIIEN FOR DATABASES



**Publish, share, give access,  
discover, re-use**

## **DBRepo**

- Creation and hosting of databases according to FAIR principles.
- Supporting reproducible queries, data versioning, and searching for specific research datasets

→ Databases are often set up locally in each research unit

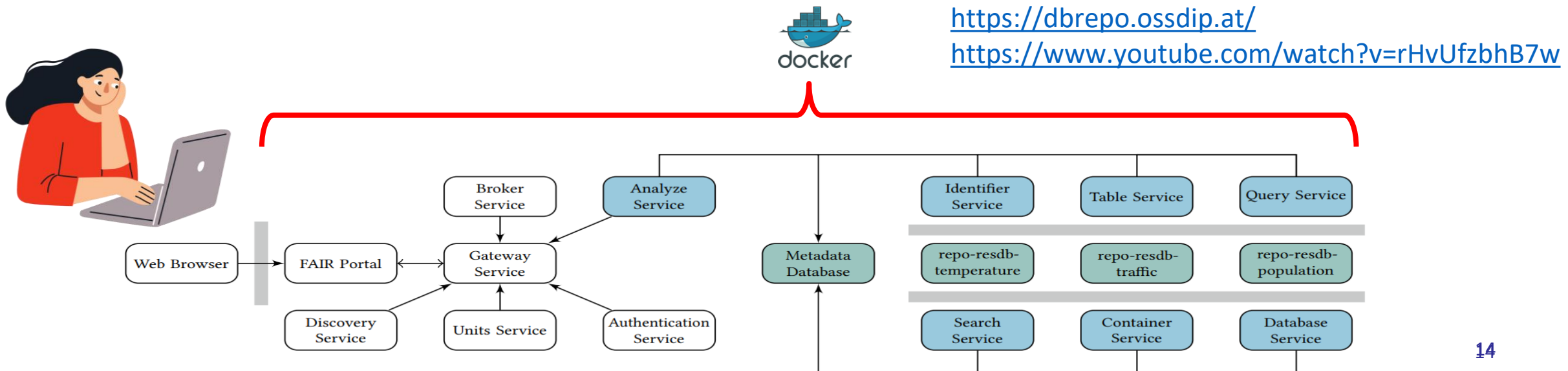
→ Require admin skills

→ Databases are not properly curated and archived after the research project is completed

# NEXT-GENERATION REPOSITORIEN FOR DATABASES

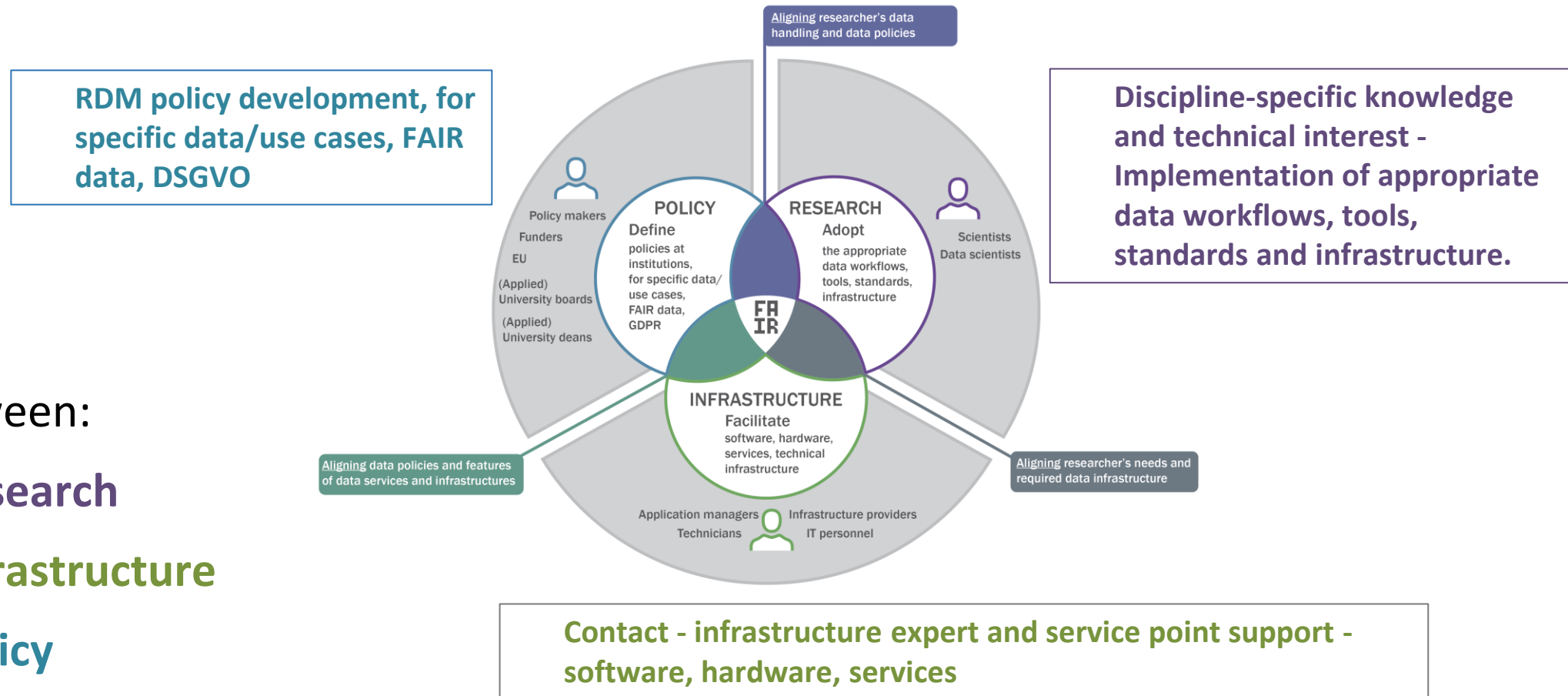
First prototype of FDA DBRepo:

- Graphical user interface (FAIR Portal)
- Databases encapsulated in Docker containers
- Metadata database - persistent identifiers and citation of arbitrary subsets of dynamic data
- Microservice architecture - modularity and scalability
- Data versioning - reproducible and citable datasets



# DEVELOPMENT AND PROFESSIONALIZATION OF DATA STEWARDS

Implementation areas for data stewardship



Link between:

- **Research**
- **Infrastructure**
- **Policy**

S. Scholtens, M. Jetten, J. Böhmer, C. Staiger, I. Slouwerhof, M. van der Geest, C.W.G van Gelder (2019, October 5). Towards FAIR data steward as profession for the lifesciences. Report of a ZonMw funded collaborative approach built on existing expertise. Zenodo. <http://doi.org/10.5281/zenodo.3471708>

Reichman, S., Hasani-Mavriqi, I. (2021). Entwicklung eines Konzepts für Data Stewards an österreichischen Universitäten. <https://doi.org/10.25365/phaidra.243>

# DEVELOPMENT AND PROFESSIONALIZATION OF DATA STEWARDS

## National initiative

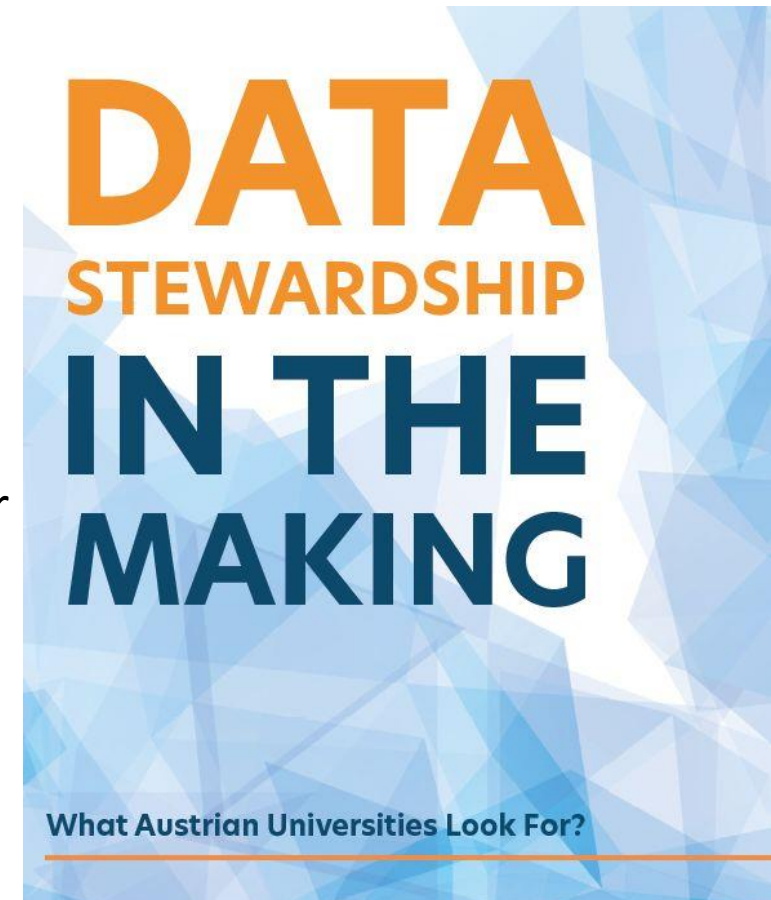
### Goals:

- Develop a common understanding of the role and tasks of a data steward in different institutional contexts
- Coordinate data stewardship activities at the national and international levels
- Establish cross-university data stewardship programs
- Define data steward models, profiles, competencies and training for the Austrian context

→ Report: <https://tinyurl.com/data-stewards>

### *Certificate Course Data Stewards at the University of Vienna*

- Part-time continuing education program based on the "Data Librarian" certificate course
- Start - October 2022





# RDM TRAINING



## Curated OER Collection

- Location and time-independent
- Suitable for self-study



## Webinar Series

- “Research Data Management in Austria”
- Recorded talks and lectures in the collection



## Institutional Training

- (Further) development of virtual face-to-face courses for local target groups

Compact introductory materials on 9 key RDM topics using Open Educational resources  
<https://fair-office.at/lernen-sie-mehr/?lang=en>

- 18 webinars:
  - Average of 70 participants/webinar
  - Slides and recordings of the webinars: Phaidra and [YouTube](#)
- The Carpentries Austria
- Certified Carpentries Instructors and 3 Carpentries-Workshops

# FAIR OFFICE AUSTRIA



- **Launch FAIR Office Austria:** June 2021
- Founding team = consortium of TU Vienna, TU Graz & University of Vienna
- Mission: We connect stakeholders from research communities and service providers. Together, we help to advance the FAIR principles
- FAIR Office Austria = GO FAIR [National Support and Coordination Office](#)
- Coordination with other national/regional GO FAIR Offices
- Involvement of Austrian stakeholders in GO FAIR Implementation Networks (INs)
- More information at: <https://fair-office.at/>



News & Events



# FAIR DATA AUSTRIA PARTNERS AND NETWORKS



# EUROPEAN OPEN SCIENCE CLOUD (EOSC)

*The project contributes to the strengthening of knowledge transfer between universities, business and society and supports the sustainable implementation of the **European Open Science Cloud (EOSC)***



## **EOSC Association Task Forces**

*Researcher Engagement & Adoption, Data Stewardship Curricula and Career Paths, Long-term data preservation, Infrastructures for quality research software, Technical Interoperability of Data & Services*

## **EOSC Support Office Austria**



[eosc-austria.at/](https://eosc-austria.at/)

**EOSC Support Office Austria:** TU Wien, TU Graz, Uni Wien, Naturhistorisches Museum Wien, CCCA, JKU Linz, ACONET NREN, FAIR Office Austria, Open Knowledge Maps, Veterinärmedizinische Universität Wien  
Forum Universitätsbibliotheken Österreichs (ubifo)  
Akademie der Bildenden Künste Wien

*Management Board, Synergy Team, AGs: Researcher Engagement, Austria Country Profile, Collections, KPI, Technische Infrastruktur, Data Stewardship, Stakeholder Engagement, Training*

# CONTACT

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[forschungsdaten.at/fda/kontakt/](https://forschungsdaten.at/fda/kontakt/)

<https://eosc-austria.at/contact/>